Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Journal of Substance Abuse Treatment xxx (xxxx) xxxx

Contents lists available at ScienceDirect

Journal of Substance Abuse Treatment

journal homepage: www.elsevier.com/locate/jsat

Adaptations to jail-based buprenorphine treatment during the COVID-19 pandemic

Alexandra Duncan[a,*], Noah Sanders[b], Maria Schiff[c], Tyler N.A. Winkelman[d,e]

[a] The Pew Charitable Trusts, 901 E Street NW, Washington, DC 20004, United States of America
[b] University of Minnesota Medical School, 420 Delaware Street SE, Minneapolis, MN 55455, United States of America
[c] Chevy Chase, MD, United States of America
[d] Health, Homelessness, and Criminal Justice Lab, Hennepin Healthcare Research Institute, 701 Park Ave, S2.309, Minneapolis, MN 55415, United States of America
[e] General Internal Medicine, Department of Medicine, Hennepin Healthcare, 701 Park Ave, Minneapolis, MN 55415, United States of America

ARTICLE INFO

Keywords:
Jail
Buprenorphine
COVID-19

ABSTRACT

Correctional facilities are among the highest-risk settings for the spread of COVID-19. Prior to the COVID-19 pandemic, the Hennepin County Jail in Minneapolis, Minnesota, offered short-term methadone maintenance, buprenorphine initiation and maintenance, and naltrexone initiation and maintenance to all jail residents with moderate to severe opioid use disorder (OUD). In response to the pandemic, the jail reduced its population by 43%. The reduced jail census and relaxed federal telemedicine regulations in response to the COVID-19 public health emergency declaration allowed the jail to institute modifications that permitted individuals to start buprenorphine without an initial in-person visit with a clinician. The jail also instituted a buprenorphine taper to bridge individuals to maintenance or provide withdrawal management, depending on patient preference. With a decreased jail census, the use of remote visits, and modifications to the buprenorphine treatment program, clinicians are able to meet the OUD treatment demand. Some jails may need additional funding streams to offset pandemic-related health treatment costs.

1. Literature review

Correctional facilities are among the highest risk settings for the spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Reinhart & Chen, 2020). As of August 18, 2020, there were more than 105,000 coronavirus disease 2019 (COVID-19) cases reported in prisons across the United States (The COVID Prison Project, 2020). Correctional facility policies and procedures during the pandemic are well documented (Pruni, 2020), yet little attention has been paid to the efforts of correctional facilities to meet health needs beyond those related to COVID-19.

The COVID-19 pandemic began at a time when some U.S. correctional facilities were beginning to implement programs to use medications for opioid use disorder (MOUD) (i.e., methadone, buprenorphine, and naltrexone) to curb the opioid overdose crisis. Individuals with opioid use disorder (OUD) may be particularly vulnerable to COVID-19 due to the effects of opioids on the respiratory system (Volkow, 2020) and continue to remain at high risk of overdose and death, particularly soon after release from incarceration (Ranapurwala et al., 2018). MOUD reduces overdose and mortality for individuals leaving correctional facilities, though access to these medications has historically been limited during incarceration (National Academies of Sciences, Engineering, and Medicine, 2019; Wakeman & Rich, 2015). The few correctional facilities that had been providing MOUD prior to the COVID-19 pandemic may be challenged to continue these services due to competing demands, including limited patient contact due to quarantines, increased COVID-19 testing, and frequent symptom checks for COVID-19 positive patients.

2. Current state of services

The Hennepin County Jail in Minneapolis, Minnesota—a pre-trial booking and detention facility housing individuals pre- and post-arraignment—reduced its jail population by 43% in response to the COVID-19 pandemic (4912 jail discharges in January–February 2020 and 2794 jail discharges in April–May 2020; Table 1). The median length of stay in the jail was two days, which did not change during the COVID-19 pandemic. Prior to the pandemic, the jail offered short-term methadone maintenance, buprenorphine initiation and maintenance, and naltrexone initiation and maintenance to all jail residents with

* Corresponding author.
E-mail addresses: aduncan@pewtrusts.org (A. Duncan), sande713@umn.edu (N. Sanders), tyler.winkelman@hcmed.org (T.N.A. Winkelman).

https://doi.org/10.1016/j.jsat.2020.108161
Received 14 June 2020; Received in revised form 20 August 2020; Accepted 5 October 2020
0740-5472/

Table 1
Sociodemographic characteristics, substance use patterns, and receipt of buprenorphine during incarceration before and during the COVID-19 pandemic.

	Jail discharges	
	Pre-COVID-19 pandemic (Jan -Feb 2020)	During COVID-19 pandemic (Apr – May 2020)
Total discharges	4912	2794
Gender		
Male	3771 (76.8%)	2253 (80.6%)
Female	1141 (23.2%)	541 (19.4%)
Race/ethnicity		
White	928 (18.9%)	496 (17.8%)
African American	2121 (43.2%)	1288 (46.1%)
Latinx	193 (3.9%)	123 (4.4%)
Native American	426 (8.7%)	194 (6.9%)
Asian or Pacific Islander	54 (1.1%)	44 (1.6%)
Other/unknown	1190 (24.2%)	649 (23.2%)
Median length of jail stay (days)	2.0	2.0
Self-reported substance use		
Any alcohol use	726 (14.8%)	418 (15.0%)
Any cocaine use	69 (1.4%)	58 (2.1%)
Any methamphetamine use	295 (6.0%)	197 (7.1%)
Any heroin use	379 (7.7%)	226 (8.1%)
Methamphetamine and/or cocaine use among those who use heroin	90 (23.7%)	70 (31.0%)
Received buprenorphine (initiation, maintenance, or taper) during jail stay	137 (2.8%)	219 (7.8%)

moderate to severe OUD. The need for OUD treatment in the jail has remained during the COVID-19 pandemic, as illustrated by 7.7% (n = 379) self-reporting heroin use at intake pre-COVID-19 and 8.1% (n = 226) during COVID-19.

The Hennepin County Jail continued its pre-existing MOUD program and, because of relaxed federal telemedicine regulations in response to the COVID-19 public health emergency declaration (Drug Enforcement Administration, 2020), instituted modifications that allows buprenorphine initiation without an initial in-person visit with a clinician. In this modified program, a clinician waivered to prescribe buprenorphine for OUD conducts telemedicine encounters with audio and video capabilities. Patients use a computer in the jail medical unit with the assistance of an onsite nurse. Telemedicine visits have helped jail clinicians to see patients quickly while maintaining physical distance. In addition, individuals are now offered a buprenorphine taper on admission. The majority of individuals received buprenorphine during the COVID-19 pandemic through this new taper (55.3% [121/219]). Individuals interested in maintenance are scheduled for an in-depth assessment within 1–2 days, typically before any dose reduction in the taper. Because many jails stays are 36 hours or less, some individuals interested in maintenance do not complete the in-depth assessment. This leads to a higher number of individuals receiving a taper only. Changes made to nurse intake procedures due to the COVID-19 pandemic also resulted in medical staff more thoroughly reviewing pre-incarceration substance use. At intake, nurses now complete a checklist of possible COVID-19 symptoms with each person admitted to the jail. The checklist, adapted from national surveys, includes questions about substance-specific withdrawal symptoms and recency, frequency, and route of use.

With a decreased jail census, the use of remote visits, and modifications to the buprenorphine treatment program, clinicians can meet the OUD treatment demand. Before the COVID-19 pandemic, individuals were commonly discharged or went through withdrawal prior to starting buprenorphine (2.8% [137/4912] of all discharges received buprenorphine January–February 2020 vs. 7.8% [219/2794] of all discharges in April–May 2020). In addition to the remote buprenorphine initiation and taper programs, clinicians at the jail also use telemedicine for mental health and general medical services. Individuals initiated on buprenorphine for maintenance and those taking buprenorphine upon admission are provided a seven-day prescription upon discharge. This jail implemented this prescription policy prior to COVID-19, and it has remained consistent. It has been difficult for the jail to track post-release buprenorphine use due to the fragmentation of electronic health record data systems and restrictions on the use of substance use data for evaluation and research purposes.

3. What this means for the field

Relaxed telemedicine guidelines that permit jail clinicians to initiate patients on buprenorphine without an in-person visit should continue after the pandemic emergency declaration is lifted to allow jail clinicians increased flexibility, particularly on weekends when many correctional facilities do not have an on-site prescriber.

Newly instituted remote initiations and tapers of buprenorphine at the jail are examples of policy changes and clinical creativity during a pandemic during which physical distancing is critical yet clinicians must continue to treat opioid withdrawal symptoms. The taper policy, while not dependent on the continuation of relaxed federal telemedicine regulations, makes patient care efficient and is a practice that jail clinicians intend to continue beyond the current pandemic. A reduced census has helped jail clinicians to meet patients' needs related to COVID-19 (i.e., increased symptom screening, quarantine, and testing), while improving access to MOUD. Public safety officials, among others, will determine whether a reduced jail census continues after the COVID-19 public health emergency declaration is lifted. New health services related to COVID-19, such as COVID-19 screening, testing, treatment, and quarantine procedures, have required financial resources. Whether this increased time for nurses and other providers can be sustained during a time when county budgets are facing deep deficits is unclear.

Jails faced health financing challenges prior to the pandemic. The additional health costs of COVID-19 strain an already challenged health system that counties primarily finance. Some jails may need additional funding streams to offset pandemic-related health treatment costs. Medicaid waivers are a potential avenue to pay for jail-based health care services, none of which are currently reimbursable. Both Illinois and New York have submitted 1115 Medicaid waivers to cover certain health care services provided in jail, including COVID-19-related care in Illinois (Illinois Department of Health and Family Services, 2020) and OUD treatment in the 30 days prior to release in New York (New York State, 2020). As of August 13, 2020, Illinois' and New York's application decisions were still pending. If approved, other states could follow suit to shift COVID-19 expenses from county budgets to Medicaid and finance addiction treatment services during incarceration through Medicaid.

Nearly all individuals in jail ultimately return to their communities. Thus, the care provided in correctional facilities plays a critical role in both infectious and non-infectious epidemics such as the COVID-19 pandemic and the opioid overdose crisis, respectively. Improving access to MOUD for individuals involved in the criminal justice system saves lives, improves one's ability to manage the health precautions recommended during the COVID-19 pandemic, and reduces strain on emergency departments and hospitals.

Funding source

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Credit authorship contribution statement

Alexandra Duncan: Conceptualization, Funding acquisition, Methodology, Project administration, Supervision, Writing - original

draft, Writing - review & editing. **Noah Sanders:** Conceptualization, Data curation, Formal analysis, Methodology, Writing - original draft, Writing - review & editing. **Maria Schiff:** Conceptualization, Writing - original draft, Writing - review & editing. **Tyler N.A. Winkelman:** Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Supervision, Validation, Writing - original draft, Writing - review & editing.

Declaration of competing interest

None.

Acknowledgements

The authors thank Beth Connolly for her thoughtful feedback.

References

Drug Enforcement Administration (2020). COVID-19 information page. https://www.deadiversion.usdoj.gov/coronavirus.html, Accessed date: 1 June 2020.

Illinois Department of Healthcare and Family Services (2020). Illinois COVID-19 Section 1115(a) Demonstration Application. https://www.illinois.gov/hfs/SiteCollectionDocuments/03262020IllinoisCOVID19Section1115DemonstrationProposalFinal.pdf, Accessed date: 8 June 2020.

National Academies of Sciences, Engineering, and Medicine (2019). Medications for Opioid Use Disorder Save Lives. Washington, DC: The National Academies Press. doi:10.17226/25310. Accessed 1 June 2020.

New York State (2020). Medicaid Redesign 1115 Demonstration Amendment Application: Continuity of Coverage for Justice–involved Populations. https://www.health.ny.gov/health_care/medicaid/program/medicaid_health_homes/special_populations/amendment_app.htm, Accessed date: 1 June 2020.

Pruni, A. (2020, April 22). Hennepin County Jail Population Cut by 44% in Light of COVID-19. Minnesota Spokesman-Recorder https://spokesman-recorder.com/2020/04/22/hennepin-county-jail-population-cut-by-44-in-light-of-covid-19/.

Ranapurwala, S. I., Shanahan, M. E., Alexandridis, A. A., Proescholdbell, S. K., Naumann, R. B., Edwards, D., Jr., & Marshall, S. W. (2018). Opioid overdose mortality among former North Carolina inmates: 2000–2015. *AJPH, 108*(9), 1207–1213. https://doi.org/10.2105/AJPH.2018.304514.

Reinhart, E., & Chen, D. (2020). Incarceration and its disseminations: COVID-19 pandemic lessons from Chicago's Cook County Jail. *Health Affairs*. https://doi.org/10.1377/hlthaff.2020.00652.

The COVID Prison Project (2020). https://covidprisonproject.com/, Accessed date: 18 August 2020.

Volkow, N. (2020). COVID-19: potential implications for individuals with substance use disorders. Scientific American. https://blogs.scientificamerican.com/observations/covid-19-potential-implications-for-individuals-with-substance-use-disorders/, Accessed date: 1 June 2020.

Wakeman, S. E., & Rich, J. D. (2015). Addiction treatment within U.S. correctional facilities: Bridging the gap between current practice and evidence-based care. *Journal of Addictive Diseases, 34*(2–3), 220–225. https://doi.org/10.1080/10550887.2015.1059217.